



## SEQUENCE LISTING

<110> Tudan, Christopher R.  
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Cashman, Johanne  
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Salari, Hassan

<120> CXCR Agonist Treatment of Hematopoietic  
Cells

<130> SMAR-012CIP

<140> 10/086,177

<141> 2002-02-26

<150> 09/835,107

<151> 2000-04-12

<150> 60/232,425

<151> 2000-09-14

<150> CA 2,305,036

<151> 2000-04-12

<150> CA 2,335,109

<151> 2001-02-23

<160> 34

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<210> 1

<211> 67

<212> PRT

<213> Homo sapiens

<400> 1

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1				5				10						15	
His	Val	Ala	Arg	Ala	Asn	Val	Lys	His	Leu	Lys	Ile	Leu	Asn	Thr	Pro
			20				25						30		
Asn	Cys	Ala	Leu	Gln	Ile	Val	Ala	Arg	Leu	Lys	Asn	Asn	Asn	Arg	Gln
		35				40					45				
Val	Cys	Ile	Asp	Pro	Lys	Leu	Lys	Trp	Ile	Gln	Glu	Tyr	Leu	Glu	Lys
	50					55					60				
Ala	Leu	Asn													
65															

<210> 2  
 <211> 93  
 <212> PRT  
 <213> Homo sapiens

<400> 2  
 Met Asn Ala Lys Val Val Val Val Leu Val Leu Val Leu Thr Ala Leu  
 1 5 10 15  
 Cys Leu Ser Asp Gly Lys Pro Val Ser Leu Ser Tyr Arg Cys Pro Cys  
 20 25 30  
 Arg Phe Phe Glu Ser His Val Ala Arg Ala Asn Val Lys His Leu Lys  
 35 40 45  
 Ile Leu Asn Thr Pro Asn Cys Ala Leu Gln Ile Val Ala Arg Leu Lys  
 50 55 60  
 Asn Asn Asn Arg Gln Val Cys Ile Asp Pro Lys Leu Lys Trp Ile Gln  
 65 70 75 80  
 Glu Tyr Leu Glu Lys Ala Leu Asn Lys Arg Phe Lys Met  
 85 90

<210> 3  
 <211> 93  
 <212> PRT  
 <213> Homo sapiens

<400> 3  
 Met Asn Ala Lys Val Val Val Val Leu Val Leu Val Leu Thr Ala Leu  
 1 5 10 15  
 Cys Leu Ser Asp Gly Lys Pro Val Ser Leu Ser Tyr Arg Cys Pro Cys  
 20 25 30  
 Arg Phe Phe Glu Ser His Val Ala Arg Ala Asn Val Lys His Leu Lys  
 35 40 45  
 Ile Leu Asn Thr Pro Asn Cys Ala Leu Gln Ile Val Ala Arg Leu Lys  
 50 55 60  
 Asn Asn Asn Arg Gln Val Cys Ile Asp Pro Lys Leu Lys Trp Ile Gln  
 65 70 75 80  
 Glu Tyr Leu Glu Lys Ala Leu Asn Lys Arg Phe Lys Met  
 85 90

<210> 4  
 <211> 17  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized in Laboratory: SDF-1 (1-17): or  
 CTCE9902

<400> 4  
 Lys Pro Val Ser Leu Ser Tyr Arg Cys Pro Cys Arg Phe Phe Glu Ser

1  
His

5

10

15

<210> 5  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthesized in Laboratory

<400> 5  
Arg Phe Phe Glu Ser His  
1 5

<210> 6  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthesized in Laboratory

<400> 6  
Lys Pro Val Ser Leu Ser Tyr Arg Cys  
1 5

<210> 7  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthesized in Laboratory: SDF-1 (1-9)  
2-C9/C9-cysteine dimer: or CTCE9901

<400> 7  
Lys Pro Val Ser Leu Ser Tyr Arg Cys  
1 5

<210> 8  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>

<223> Synthesized in Laboratory

<221> VARIANT

<222> 10

<223> Xaa = Any Amino Acid

<221> VARIANT

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<223> Xaa = Any Amino Acid

<400> 8

Lys Pro Val Ser Leu Ser Tyr Arg Cys Xaa

1

5

10

<210> 9

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthesized in Laboratory

<400> 9

Lys Pro Val Ser Leu Ser Tyr Arg Cys

1

5

<210> 10

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthesized in Laboratory

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<222> 9

<223> Xaa = Any Amino Acid

<221> VARIANT

<222> 9

<223> Xaa = Any Amino Acid

<400> 10

Lys Pro Val Ser Leu Ser Tyr Arg Xaa

1

5

<210> 11

<211> 8

<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthesized in Laboratory

<400> 11  
Lys Pro Val Ser Leu Ser Tyr Arg  
1 5

<210> 12  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthesized in Laboratory: SDF-1 (1-14) - (G)  
3-SDF-1 (55-67) acid

<400> 12  
Lys Pro Val Ser Leu Ser Tyr Arg Cys Pro Cys Arg Phe Phe Gly Gly  
1 5 10 15  
Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25 30

<210> 13  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthesized in Laboratory: SDF-1 (1-14) - (G)  
3-SDF-1 (55-67) acid: or CTCE0013

<400> 13  
Lys Pro Val Ser Leu Ser Tyr Arg Cys Pro Cys Arg Phe Phe Gly Gly  
1 5 10 15  
Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25 30

<210> 14  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthesized in Laboratory: SDF-1 (1-14) - (G)  
3-SDF-1 (55-67) amide

<400> 14  
 Lys Pro Val Ser Leu Ser Tyr Arg Cys Pro Cys Arg Phe Phe Gly Gly  
   1                  5                  10                  15  
 Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
           20                  25                  30

<210> 15  
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 <213> Artificial Sequence

<220>  
 <223> Synthesized in Laboratory: SDF-1 (1-14) - (G)  
       3-SDF-1 (55-67) amide: or CTCE0017

<400> 15  
 Lys Pro Val Ser Leu Ser Tyr Arg Cys Pro Cys Arg Phe Phe Gly Gly  
   1                  5                  10                  15  
 Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
           20                  25                  30

<210> 16  
 <211> 33  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized in Laboratory: SDF-1 (1-17) - (G)  
       3-SDF-1 (55-67) acid

<400> 16  
 Lys Pro Val Ser Leu Ser Tyr Arg Cys Pro Cys Arg Phe Phe Glu Ser  
   1                  5                  10                  15  
 His Gly Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu  
           20                  25                  30  
 Asn

<210> 17  
 <211> 34  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized in Laboratory: SDF-1 (1-17) - (G)  
       3-SDF-1 (55-67) acid

<400> 17

Lys	Pro	Val	Ser	Leu	Ser	Tyr	Arg	Cys	Pro	Cys	Arg	Phe	Phe	Glu	Ser
1				5				10						15	
His	Gly	Gly	Gly	Gly	Leu	Lys	Trp	Ile	Gln	Glu	Tyr	Leu	Glu	Lys	Ala
			20					25					30		

Leu Asn

<210> 18  
 <211> 33  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized in Laboratory: SDF-1 (1-17) - (G)  
 3-SDF-1 (55-67) amide

Lys	Pro	Val	Ser	Leu	Ser	Tyr	Arg	Cys	Pro	Cys	Arg	Phe	Phe	Glu	Ser
1				5				10						15	
His	Gly	Gly	Gly	Gly	Leu	Lys	Trp	Ile	Gln	Glu	Tyr	Leu	Glu	Lys	Ala
				20				25					30		

Asn

<210> 19  
 <211> 34  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized in Laboratory: SDF-1 (1-17) - (G)  
 3-SDF-1 (55-67) amide

Lys	Pro	Val	Ser	Leu	Ser	Tyr	Arg	Cys	Pro	Cys	Arg	Phe	Phe	Glu	Ser
1				5				10						15	
His	Gly	Gly	Gly	Gly	Leu	Lys	Trp	Ile	Gln	Glu	Tyr	Leu	Glu	Lys	Ala
				20				25					30		

Leu Asn

<210> 20  
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<220>  
 <223> Synthesized in Laboratory: SDF-1 (1-14) - (G)

4-SDF-1 (55-67) - E24/K28-cyclic acid

<400> 20

Lys	Pro	Val	Ser	Leu	Ser	Tyr	Arg	Cys	Pro	Cys	Arg	Phe	Phe	Gly	Gly
1				5				10						15	
Gly	Gly	Leu	Lys	Trp	Ile	Gln	Glu	Tyr	Leu	Glu	Lys	Ala	Leu	Asn	
			20					25						30	

<210> 21

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthesized in Laboratory: SDF-1 (1-14) - (G)

4-SDF-1 (55-67) - K20/E24-cyclic acid

<400> 21

Lys	Pro	Val	Ser	Leu	Ser	Tyr	Arg	Cys	Pro	Cys	Arg	Phe	Phe	Gly	Gly
1				5				10						15	
Gly	Gly	Leu	Lys	Trp	Ile	Gln	Glu	Tyr	Leu	Glu	Lys	Ala	Leu	Asn	
			20					25						30	

<210> 22

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthesized in Laboratory: SDF-1 (1-14) - (G)

4-SDF-1 (55-67) - E24/K28-cyclic acid: or CTCE0022

<400> 22

Lys	Pro	Val	Ser	Leu	Ser	Tyr	Arg	Cys	Pro	Cys	Arg	Phe	Phe	Gly	Gly
1				5				10						15	
Gly	Gly	Leu	Lys	Trp	Ile	Gln	Glu	Tyr	Leu	Glu	Lys	Ala	Leu	Asn	
			20					25						30	

<210> 23

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthesized in Laboratory: SDF-1 (1-14) - (G)

4-SDF-1 (55-67) - K20/E24-cyclic acid: or CTCE0021

<400> 23



Lys	Pro	Val	Ser	Leu	Ser	Tyr	Arg	Cys	Pro	Cys	Arg	Phe	Phe	Gly	Gly
1				5					10					15	
Gly	Gly	Leu	Lys	Trp	Ile	Gln	Glu	Tyr	Leu	Glu	Lys	Ala	Leu	Asn	
			20					25					30		

<210> 24  
 <211> 31  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized in Laboratory: SDF-1 (1-14) - (G)  
 4-SDF-1 (55-67) - K20/D24-cyclic acid

Lys	Pro	Val	Ser	Leu	Ser	Tyr	Arg	Cys	Pro	Cys	Arg	Phe	Phe	Gly	Gly
1				5					10					15	
Gly	Gly	Leu	Lys	Trp	Ile	Gln	Asp	Tyr	Leu	Glu	Lys	Ala	Leu	Asn	
			20					25					30		

<210> 25  
 <211> 31  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized in Laboratory: SDF-1 (1-14) - (G)  
 4-SDF-1 (55-67) - K20/D24-cyclic amide

Lys	Pro	Val	Ser	Leu	Ser	Tyr	Arg	Cys	Pro	Cys	Arg	Phe	Phe	Gly	Gly
1				5					10					15	
Gly	Gly	Leu	Lys	Trp	Ile	Gln	Asp	Tyr	Leu	Glu	Lys	Ala	Leu	Asn	
			20					25					30		

<210> 26  
 <211> 31  
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 <213> Artificial Sequence

<220>  
 <223> Synthesized in Laboratory: SDF-1 (1-14) - (G)  
 4-SDF-1 (55-67) - C9/C11-cyclic acid

Lys	Pro	Val	Ser	Leu	Ser	Tyr	Arg	Cys	Pro	Cys	Arg	Phe	Phe	Gly	Gly
1				5					10					15	
Gly	Gly	Leu	Lys	Trp	Ile	Gln	Glu	Tyr	Leu	Glu	Lys	Ala	Leu	Asn	

<210> 27  
 <211> 31  
 <212> PRT  
 <213> Artificial Sequence

<220>

<223> Synthesized in Laboratory: SDF-1 (1-14) - (G)  
 4-SDF-1 (55-67) - C9/C11-cyclic amide

<400> 27

Lys	Pro	Val	Ser	Leu	Ser	Tyr	Arg	Cys	Pro	Cys	Arg	Phe	Phe	Gly	Gly
1				5				10						15	
Gly	Gly	Leu	Lys	Trp	Ile	Gln	Glu	Tyr	Leu	Glu	Lys	Ala	Leu	Asn	
			20					25						30	

<210> 28  
 <211> 33  
 <212> PRT  
 <213> Artificial Sequence

<220>

<223> Synthesized in Laboratory: SDF-1 (1-14) - (G)  
 4-MIP-1 alpha (36-50) amide

<400> 28

Lys	Pro	Val	Ser	Leu	Ser	Tyr	Arg	Cys	Pro	Cys	Arg	Phe	Phe	Gly	Gly
1				5				10						15	
Gly	Gly	Ser	Lys	Pro	Gly	Val	Ile	Phe	Leu	Thr	Lys	Arg	Ser	Arg	Gln
			20					25						30	

Val

<210> 29  
 <211> 58  
 <212> PRT  
 <213> Artificial Sequence

<220>

<223> Synthesized in Laboratory: SDF-1 (1-14) - (G)  
 4-MIP-1 alpha (11-50) -acid or amide

<400> 29

Lys	Pro	Val	Ser	Leu	Ser	Tyr	Arg	Cys	Pro	Cys	Arg	Phe	Phe	Gly	Gly
1				5				10						15	
Gly	Gly	Cys	Cys	Phe	Ser	Tyr	Thr	Ser	Arg	Gln	Ile	Pro	Gln	Asn	Phe
			20					25						30	

Ile Ala Asp Tyr Phe Glu Thr Ser Ser Gln Cys Ser Lys Pro Gly Val  
           35                          40                          45  
 Ile Phe Leu Thr Lys Arg Ser Arg Gln Val  
       50                          55

<210> 30  
 <211> 33  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized in Laboratory: SDF-1 (1-14) - (G)  
       4-MIP-1 alpha (56-70) -acid or amide

<400> 30  
 Lys Pro Val Ser Leu Ser Tyr Arg Cys Pro Cys Arg Phe Phe Gly Gly  
   1                          5                          10                          15  
 Gly Gly Glu Glu Trp Val Gln Lys Tyr Val Asp Asp Leu Glu Leu Ser  
           20                          25                          30  
 Ala

<210> 31  
 <211> 9  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized in Laboratory: SDF-1 (1-8)2-lysine  
       bridge dimer: CTCE9904

<400> 31  
 Lys Pro Val Ser Leu Ser Tyr Arg Lys  
   1                          5

<210> 32  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized in Laboratory: SDF-1 (1-8)2-lysine  
       bridge dimer: CTCE9904

<400> 32  
 Lys Pro Val Ser Leu Ser Tyr Arg  
   1                          5

<210> 33  
 <211> 40  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized in Laboratory

<400> 33  
 Cys Cys Phe Ser Tyr Thr Ser Arg Gln Ile Pro Gln Asn Phe Ile Ala  
 1 5 10 15  
 Asp Tyr Phe Glu Thr Ser Ser Gln Cys Ser Lys Pro Gly Val Ile Phe  
 20 25 30  
 Leu Thr Lys Arg Ser Arg Gln Val  
 35 40

<210> 34  
 <211> 33  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized in Laboratory: SDF-1 (1-14) - (G)  
 4-MIP-1 alpha (36-50) - acid

<400> 34  
 Lys Pro Val Ser Leu Ser Tyr Arg Cys Pro Cys Arg Phe Phe Gly Gly  
 1 5 10 15  
 Gly Gly Ser Lys Pro Gly Val Ile Phe Leu Thr Lys Arg Ser Arg Gln  
 20 25 30  
 Val